

April 7, 2005

MEMO

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FROM: William Burton (Program Manager)
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SUBJECT: Progress report for CSA Contract No. GS-00F-0007L (Delivery order No. W912PM-04-F-7010) Monitoring to Assess Potential Environmental Impacts Associated with the Dare County Beaches (Bodie Island) Shoreline Protection Project, Dare County, North Carolina

This progress report summarizes the work conducted on the Dare County beach monitoring program since the spring of 2004.

Summer 2004

After resolving logistical and equipment issues encountered during the first sampling for the program (spring 2004) all sampling, except the haul seining, was completed without delay or problems during the summer 2004 collections. The summer monitoring was conducted in late August/early September to avoid the peak tourist season and the disruption haul seining may have on public recreation. Haul seining was initially conducted on the on the 24th and 25th of August. However, due to the sensitivity of this gear to surf conditions, only limited sampling was conducted on the 24th and sampling was aborted on the 25th after only one sample. Because of severe weather patterns on the East coast, the haul seine sampling could not be resumed until the 17th of October. Due to the significant gap in time between our initial sampling and October, it was decided to re-sample the beaches spreading the remaining samples between both beaches. Therefore, limited sampling was conducted on each beach, with seven haul seines per beach. The beach seine catches were dominated by Atlantic menhaden and spot, with limited numbers of Florida pompano throughout the seines.

Offshore fish trawling was conducted between the 27th and 28th of August. The offshore trawling catch was very limited in species. Only 14 specimens, representing 8 species (Atlantic croaker, bay anchovy, spot, pigfish, butterfish, lady crab, brown shrimp, and striped burrfish) were collected in all 24 trawls. Approximately 120 fish stomachs were collected and archived for future gut content analysis. Benthic invertebrate sampling along the subject and reference beaches as well as the samples taken in the offshore sand borrow and reference area were all completed and returned to Versar's labs in Columbia, Maryland. Both the spring and summer 2004 benthic samples are currently undergoing sample processing.

Fall 2004

Funding for the fall 2004 monitoring was covered under the federal FY05 budget. Because of Congressional budget delays after the end of FY04 (September 30, 2004) we were not authorized to continue with the monitoring program until late in the fall season. When the resources were finally procured, only the field work portion of the fall program was funded delaying the sample processing for the fall benthic and stomach contents collections. Hauls seines for surf-zone fish communities were conducted between the 5th and 7th of December. However, because of non-workable physical beach conditions and local beach nourishment activities haul seining was restricted to certain portions of the beaches and in some cases seines had to be conducted back to back. The beach seine catches were dominated by lady crabs and the offshore commercial trawling consisted of primarily weakfish.

The offshore fish trawling was conducted between the 19th and 20th of November. Approximately 30 fish stomachs were collected and archived for future gut content analysis. Benthic invertebrate sampling along the subject and reference beaches as well as the samples taken in the offshore sand borrow and reference area were all completed and returned to Versar's labs in Columbia, Maryland.

In the fall 2004 the Virginia Institute of Marine Sciences completed the video sled bottom survey of the offshore borrow and reference area. Between the 8th and 9th of December, VIMS successfully surveyed 20 miles of ocean bottom. The images are currently being analyzed by Dr. Robert Diaz and his VIMS staff; a report on his findings should be available for review by May 2005.

Winter 2005

Winter sampling was conducted between February 16th and April 6th. Benthic samples from the beach and offshore study and reference sites were completed successfully and returned to Versar for benthic sorting and analysis. The offshore trawling was also completed successfully with only two windowpane flounder collected in the survey.

Haul seining was completed successfully on both the study beach and the reference beach. Due to unfavorable weather conditions a month elapsed between when the study beach was sampled and when the reference beach could be sampled. However, this was not an issue because the water temperatures were similar (within 4 degrees F) and the catches did not differ. As with the trawling there were very little individuals on both beaches with the majority of the catch being hickory shad, gizzard shad and alewives.

Recreational Fishing and Shorebird Survey

Weekly monitoring of recreational fish and shorebird use has continued uninterrupted since we initiated this activity in May 2004. This work is still being subcontracted to North Carolina Coastal Federation, who hired Ms. Abigail Porter to conduct the field work. Ms. Porter has maintained the data and on a monthly basis submits as electronic and hard copy to Versar's Columbia, Maryland offices. These data will be statistically analyzed beginning in the spring of 2005 for the first year's annual report.

Ameranthus Survey

Versar received a contract modification to conduct a two-day survey for the threatened plant *Amaranthus pumilus* in the fall of 2004. The survey was conducted as part of Versar's current beach monitoring program. The survey was conducted on October 14 and 15, 2004 between Southern Shores through the spit on the north side of Oregon Inlet. The survey was performed in mid October to avoid potential nesting birds, and so that any plants would be easier to observe due to their larger size. The survey area included a total about 28 continuous miles. The survey produced no observations of the target plant species.